District Technology Coordinator Training

FORWARD EXAM

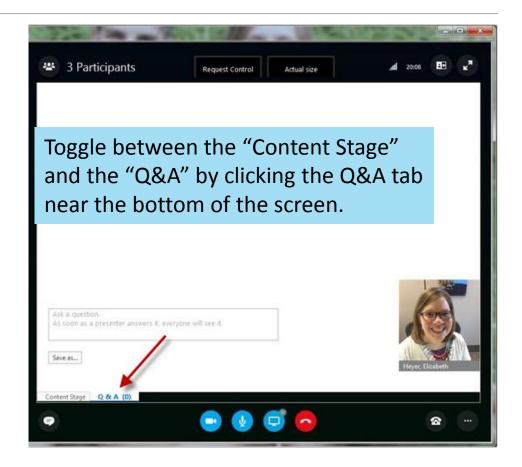
SPRING 2018





Questions?

- Please enter your question in the Q&A Section at the bottom of your screen.
- We will focus on questions that are more general and would be appropriate for the group as a whole. School or district situation specific questions will be answered later in the Q&A or via email.
- Remember your question is only visible to you and the presenters until/if a presenter types a reply. Your question and it's response will then be visible to all participants.
- We will answer as many questions as possible in a live (oral) format.
- DRC will follow up with any unanswered questions.





Agenda

- Key Dates
- Technology Resources
- Supported Devices
- System Requirements
- What's new for 2017-18
- System Overview
- Central Office vs. TSM
- Installation/Configuration
- Q & A Session





Key Dates

Event	Date
Technology Readiness Resources Available	November 1, 2017
District Technology Coordinator Training Webinar	October 25, 2017
Technology User Guide Available	November 1, 2017
Recorded Technology Training Posted	November 3, 2017
INSIGHT, TSM, and Central Office Software available	January 17, 2018
District Technology Coordinator Training/Q&A Session	January 17, 2018
DAC Pretest Workshops	January 22-26, 2018
Update Student Information System by	January 22, 2018
District Technology Coordinator Q&A Session	February 14, 2018
District Technology Coordinator Q&A Session	March 14, 2018
Forward Exam Testing Window	March 19 – May 4, 2018

For a complete and up-to-date timeline check the <u>Forward Exam Calendar webpage</u> regularly



Technology Resources

Available on the Forward Exam Technology Requirements webpage

https://dpi.wi.gov/assessment/forward/technology

Also available in eDIRECT at https://wi.drcedirect.com

All Applications \rightarrow General Information \rightarrow Documents (no login required)

Resource/Training Material	Description	
Capcity Estimator	Spreadsheet tool used to calculate bandwidth requirements on your system	
DTC Checklist	Checklist of DTC responsibilities from set-up through testing.	
System Requirements	This document describes the current system requirements for the Online Testing System	
Technology FAQs	Frequently Asked Questions regarding technology set-up and management.	
Technology User Guide	This user guide describes how to configure, install, manage, and troubleshoot the DRC INSIGHT.	
Technology Training	This training provides information about the setup, configuration, and monitoring of technology for the administration of the Forward Exam.	
Technology Q & A Sessions	Three online question and answer sessions where technology staff may ask questions related to how to configure, install, manage, and troubleshoot the DRC INSIGHT.	



Supported Devices

INSIGHT

- Windows
- Mac
- Linux (Ubuntu)
- iPad
- Chromebook

TSM

- Windows (machine or server)
- Mac (machine only)
- Linux (Ubuntu machine only)

Central Office Service Devices

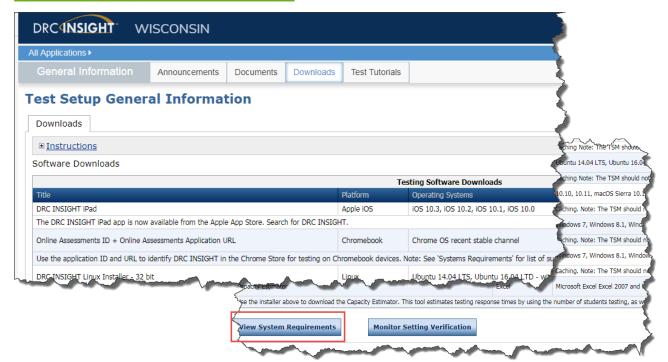
- Windows (machine or server)
- MacOS (machine or server)
- Linux (Ubuntu machine or server)



System Requirements

DIRECT LINK to system requirements:

https://wi-insight-client.drcedirect.com/contentservices/download/resources/drc-insight-system-requirements.htm



Reminder:

Technology-related documents are subject to updates. Please be sure to check for the latest version before completing work.



What's New for 2017-18

- Forward Exam Item Samplers
- eDIRECT Student Status Dashboard
- INSIGHT Updates and Improvements
- AWS CloudFront Content Hosting
- TSM Updates
- Central Office





What is eDIRECT?

eDIRECT is the Forward Exam Portal.

- Technical users download INSIGHT, the TSM, COS, and other software and links from eDIRECT to set up their testing environment.
- Administrative users use eDIRECT to manage student information, test sessions, and to help manage or monitor their testing and report the results.

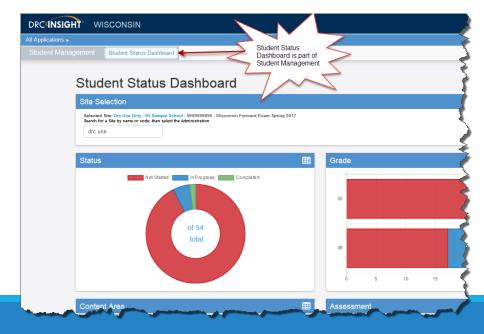


What is New in eDIRECT?

The Student Status Dashboard has a new location!
All applications → Student Management → Student Status Dashboard

DTCs will now have access to the Student Status Dashboard as part

of their permission set





What is INSIGHT?

- Secure Web Browser used for Students taking the Forward Exam
- Must be installed on each testing device
- Includes a system readiness check





What's New with INSIGHT?

Version 8.0

- Student devices will automatically prompt for an update on launch
- Chromebook fix (re-try at app launch) to fix Google Admin connectivity issue
- Content request and response payload retries (2x) reduce failures and make response caching unnecessary on most networks
- Response caching (TSM) is more optional
- iPAD app sets device in Single App mode on all devices
- Android is no longer supported



What's New with Content Hosting?

AWS CloudFront Content Hosting

- Source of content for Central Office Services (COS) and Testing Site Manager (TSM)
- INSIGHT requests content from local content host (COS/TSM) or DRC (not AWS)
- Expanded whitelisting provided in Technology User Guide

Program	URLs	Port/Protocol
Wisconsin	https://drc-centraloffice.com	80/http
	https://wi-insight-client.drcedirect.com	443/https
	https://wi-insight.drcedirect.com	(applies to all of the URLs)
	https://wi.drcedirect.com	
	https://www.drcedirect.com	
	https://wbte.drcedirect.com	
	https://dtk.drcedirect.com	
	https://api-gateway-cloud.drcedirect.com	
	https://api-gateway.drcedirect.com	
	https://cdn-content-prod.drcedirect.com	
	https://cdn-download-prod.drcedirect.com	



What is the TSM?

The Testing Site Manager (TSM) is a web-based application that provides caching and a software toolbox to help you plan, configure, and manage your online testing environment.

The TSM caching software is usually installed on one or more strategic computers with sufficient bandwidth to help manage and streamline communication between the test devices and the DRC INSIGHT server.



What is New with the TSM?

Version 9.2

- TSMs remain testing-program specific
- Forward TSM must be downloaded from eDIRECT
- Existing TSMs will auto-update to new version
- For Windows only choose 32-bit TSM for 32-bit host architecture
- Only 64-bit Windows TSM supports "Mega TSM" upgrade
- TSM is compatible with new Central Office Services Device Toolkit
- Response Caching compatible with Central Office



What is Central Office?

Central Office is made up of three components:

- Central Office Services Device Toolkit (COS-DTK)
 - Configuration User Interface replacing stand-alone Device Toolkit
- 2. Central Office Service Devices (COS)
 - Content Management Hosting Services that replace TSM
- 3. TSM (legacy system)
 - Can be used in place of COS for content caching
 - Can be used as optional response caching device



Central Office Services- Device Toolkit

- Centralized dashboard with real-time status information
- Supports multi-test program configurations
- Easier to manage centralized district-wide configurations
 - Supports content hosting device "pool" without need of load balancer
 - Supports load balancing
 - Supports "silent" deployment of content hosting devices
- Compatible with existing DTK ORG Units
 - New numeric only Org Unit ID
 - Compatible with TSM as content cache



Central Office Services Devices

- COS is new content-caching software that replaces the Testing Site Manager (TSM) as the primary local content caching solution for DRC INSIGHT.
- Once installed on the user's local network, COS devices can be configured to download a local copy of all testing content and deliver that content on demand to student testing devices



Central Office vs. TSM

CENTRAL OFFICE

- Enhanced content handling (cloud-based)
- Greater user visibility into content download info
- Supports a up to 950 concurrent testers
- Content Caching
- Content download and device readiness status info
- Single centralized user interface
- Supports multiple testing programs
- Installation flexibility
- Enhanced scalability
- Enhanced Security (SSO required)
- Option to download content to a network share location
- Response caching when CO used in tandem with TSM

TSM

- Enhanced content handling (cloud-based)
- Supports up to 500 concurrent testers only with 64-bit version
- Test readiness tools for load simulation
- Content Caching
- Response Caching



Central Office vs. TSM - Advantages

CENTRAL OFFICE

- Allows organizing device management at districtwide level
- Easy to scale single configurations to match expected loads or add additional resources to an existing configuration without the need for a load balancer
- Based on state of the art technology allow for future support of software
- Integrates with enhanced COS-DTK Dashboard functionality

TSM

- Familiar functionality requires only training on COS-DTK functionality
- Existing configurations ORG Units work without modification
- Supports optional response caching



Central Office vs. TSM - Drawbacks

CENTRAL OFFICE

- New unfamiliar functionality which requires training
- Existing configurations (ORG Units) for 2017 have to be modified or recreated to work with COS
- Optional response caching is only available in conjunction with TSM

TSM

- Less secure user interface
- Requires a load balancer to create "pools" of TSM in a single configuration
- Requires user to access a separate User Interface on each TSM to manage content downloads and other functionality
- Minimal integration with COS-DTK dashboard functionality



Content Hosting – A reliable, local copy of test content.

Important!

Central Office Services (COS) or TSM must be available for Text-to-Speech (TTS) or Video Sign Language (VSL) accessibility features to function.

So students without TTS or VSL may test on INSIGHT without COS or TSM.

Important!

An internet connection is required upon login. The username and password **must be verified** by DRC servers to release the test content.

So students need an internet connection to login.

Optional response caching allows testing to continue without internet connection



Local Choice

This year districts will have two set up options:

Option 1: COS with or without TSM (Response Caching)

Option 2: TSM

As COS is new software, Wisconsin along with most DRC states, is allowing districts choose which software (COS or TSM) to use during the roll out. We want to assure Districts who choose to go with Option 1 (COS) that in the event a critical issue should arise with COS the backup plan will be to move you back to TSM set up so testing can continue.



Option 1: COS (with or without TSM)

- Centralized management
- Supports district-wide architecture
- Supports all COS-DTK features
- With TSM Recommended for low or unreliable internet

Org Unit ID: 489515093 CM CH

Service Devices: (1)

CBJ COS 21038 - 10.11.1.43 CM CH

Device Status: 10/18/17 5:03 PM 🖒

Domain Name:

https://552d17a3-prod.drc-centraloffice.com:55222/

Wisconsin

Testing Devices: (0)

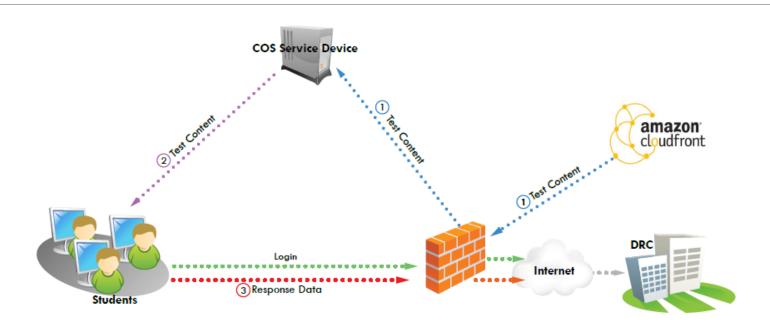
Location: (1)

Wisconsin

Admins: Wisconsin Forward Exam

Option 1: COS without TSM What it Looks Like





CONTENT MANAGEMENT AND CONTENT HOSTING

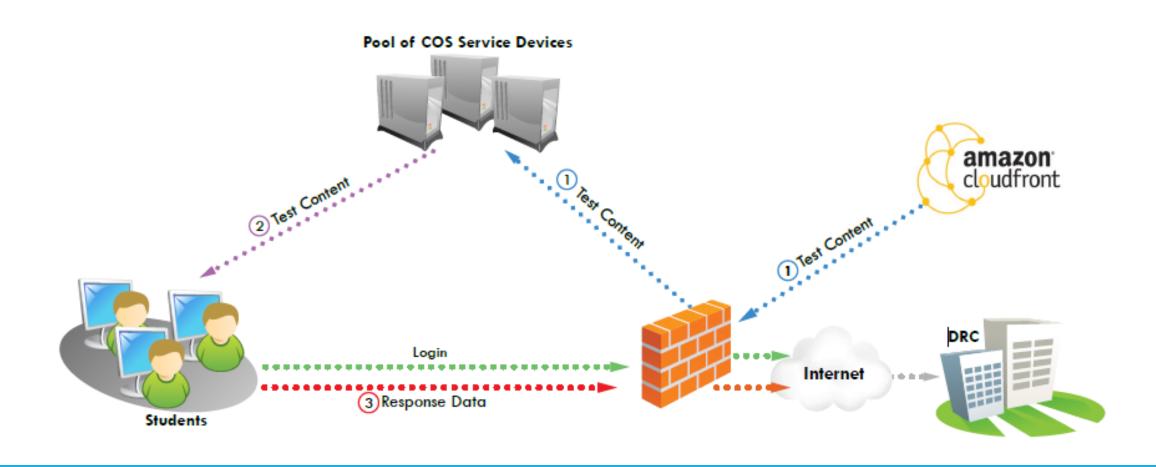
- (1) When Central Office Services (COS) is installed and configured, the Content Management service retrieves the test items from the Amazon Web Services (AWS) CloudFront and stores it on the COS service device before the students start testing.
- 2 When the students log in to their tests, COS delivers the cached test items directly from the service device to their testing devices, reducing the test startup time for these students. All of the cached test content is encrypted for security.

RESPONSES

3 During testing, if the test computers can communicate with the DRC INSIGHT server, the test responses (labeled Response Data in the diagram) go directly to the DRC server. If the testing computers cannot communicate with DRC, testing ends.

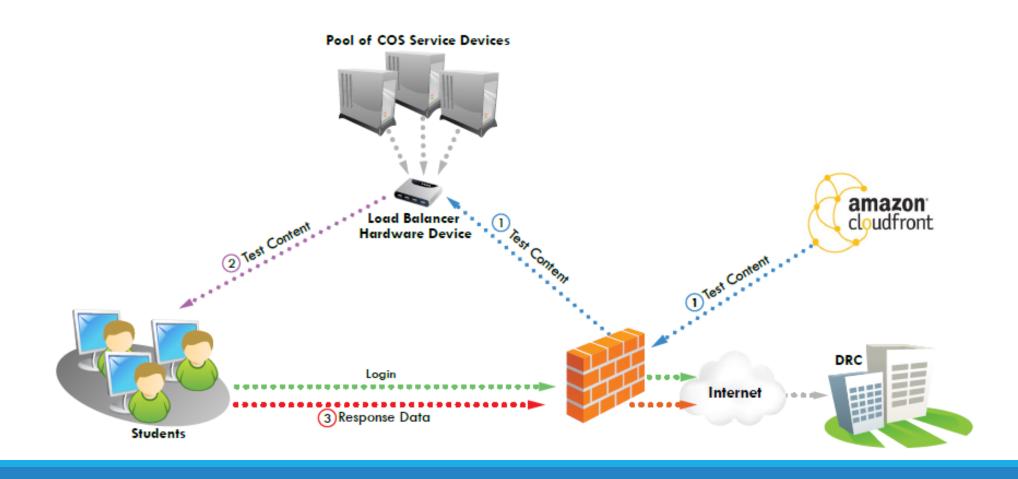
PUBLI INSTRU

Option 1: COS without TSM with added COS Devices



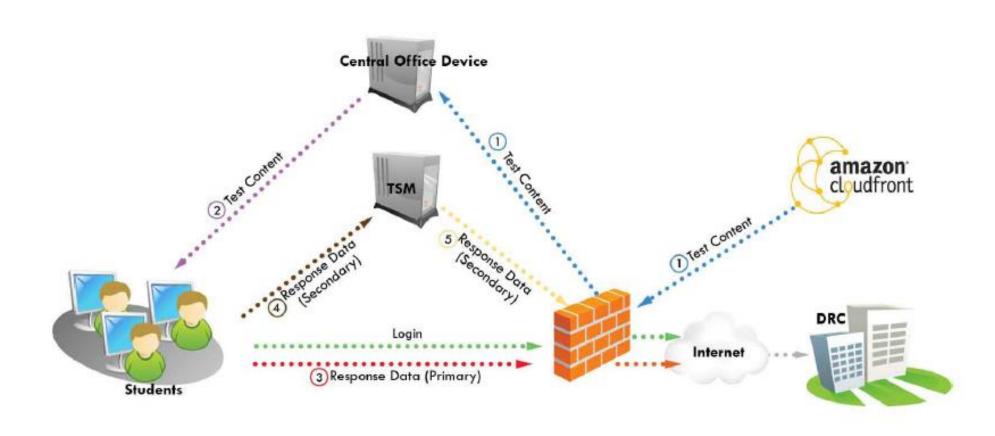


Option 1: COS without TSM with COS Devices and Load Balancer



Option 1: COS with TSM What it Looks Like







Option 1: Considerations?

Is my system more easily managed at the District-level?

 If you have centralized network infrastructure including vLAN access across multiple buildings, you may find it easier to create fewer, centrally managed configurations using a pool of COS devices.

Do I need multiple content caching devices for testing in my district?

• If you expect your concurrent testing load to exceed 500 students at any given time, you can easily add COS devices to a single configuration to meet expected testing loads.

Do I have technology staff distributed across the district or is technology staff more centralized?

• If your technology staff distribution favors centralized implementation, rather than separate management in each building, then a pool of COS devices may be more appropriate.

Do I have server-class hardware available for VM implementations?

 Virtual implementations of COS pools on server-class hardware will take advantage of easy scalability and configuration features of COS software.



Option 2: TSM

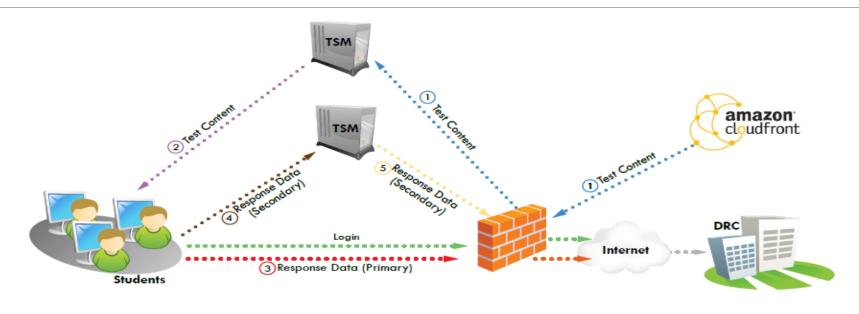
- Existing ORG Units
- Distributed (lab-based) architecture
- Supports Content and Response Caching

IMPORTANT: TSMs are testing program specific.

Download all TSMs used for Forward testing from https://wi.drcedirect.com/default.aspx

Option 2: TSM What it Looks Like





CONTENT AND CONTENT CACHING

- When a TSM is installed and configured, content caching retrieves the test items from the Amazon Web Services (AWS) CloudFront and stores it on the content caching TSM device before the students start testing.
- When the students log in to their tests, the TSM delivers the cached test items directly to their testing devices, reducing the test startup time for these students. All of the cached test content is encrypted for security.

RESPONSES AND RESPONSE CACHING

- 3 During testing, if the test computers can communicate with the DRC INSIGHT server, the test responses (labeled Primary Response Data in the diagram) go directly to the DRC server. If the testing computers cannot communicate with DRC and a TSM is not configured for response caching, testing ends.
- 4 If the testing computers cannot communicate with DRC and a TSM is configured for response caching, the response caching software buffers and stores test responses (labeled Secondary Response Data in the diagram) on the TSM server, allowing testing to continue.
- 5 If responses have been saved on the TSM, the response caching software attempts to send test responses to the DRC INSIGHT server from the TSM every fifteen minutes.



Option 2 Considerations

My TSM configuration was successful last year...

• You should be able to keep the same configuration/equipment as long as your TSM and DRC INSIGHT software are up-to-date and you are using a supported operating system.

I'm testing fewer than 25 students concurrently...

• The basic 32-bit configuration is suitable for a lab or two where you have smaller numbers of testers on the system at the same time.

I will be testing between 26 and 150 students concurrently...

• You may find that your performance will be satisfactory using less than the 64-bit recommended setup, especially if testing fewer students concurrently or fewer students with online accommodations. The more students you test concurrently and/or the more students using online accommodations, the more you will see better performance by adhering to the 64-bit recommended setup.

I want to test more than 150 students concurrently...

You should plan to use the 64-bit version of the TSM on hardware at or near the recommended levels. Before testing, you should perform load simulation tests to verify your network and testing devices are performing well. Contact DRC Customer Service for more information on options for load balancing TSMs for content caching.



Option 2 Considerations Continued

I plan to load balance my TSM...

o TSMs can be load balanced for content caching. For more information, contact DRC Customer Service.

I do not plan to use response caching...

Responses will be transmitted to DRC without a failover system on your local network. If a student experiences Internet connectivity issues, their testing session may be interrupted, requiring them to re-log in to their test session once the connectivity issue is resolved. No responses will be lost, but a student's ability to complete the test session may be hampered.

I do not plan to use content caching...

 Test content will be downloaded at the beginning of each student's test session, which might cause a significant load on your Internet bandwidth. Consider staggering start times if possible. Students will not be able to test with the online TTS or VSL accommodations.

Set-up & Installation





Option 1: COS Set-up

Setup Steps:

- 1. Prepare host machine (physical or virtual)
- 2. Install COS device (host machine)
- 3. Configure COS device (COS-DTK)
- 4. Repeat steps 1-3 to add COS devices to configuration pool



Option 1: COS Set-up Step 1

 Prepare host machine (physical or virtual)

COS supports Windows, MacOS, or Linux host machine operating systems

Host Machine considerations:

- Dedicated machine without other significant duties
- Follow current system requirements documentation guidelines
- Standard VM for up to 1000 concurrent testers
 - 8 vCPUs and 8GB RAM



Option 1: COS Set-up Step 2

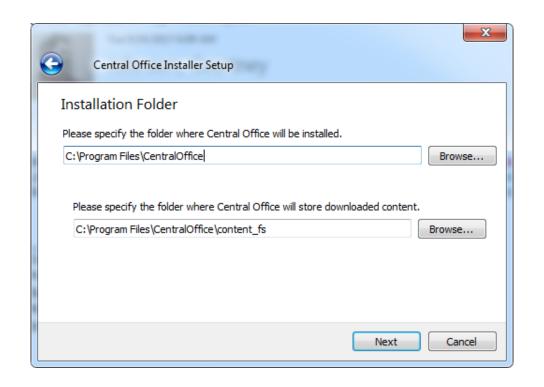
Install COS device (host machine)

- 1. Download COS installer from eDIRECT Downloads page
- 2. Copy OS-specific installer to host machine
- Launch installer
 - Installer supports manual and "silent" procedures
 - If you are creating a new configuration, use the manual installer
- 4. Follow installer steps

Option 1: COS Set-up Step 2 Continued National Installer Steps

COS installer will ask you for the following information during the installation process:

- Directory location where you want to install COS (defaults vary by OS)
- Directory location where you'd like to store hosted test content
 - Default: subfolder of installation directory
 - Configurable: any location including a shared resource on your network



Option 1: COS Set-up Step 2 Continued PUBLIC CONTINUED INSTRUCTION Installer Steps



COS installer will ask you for a Proxy Host URL (if applicable) through which COS traffic will flow



COS installer will take approximately 15 minutes to download and install all components

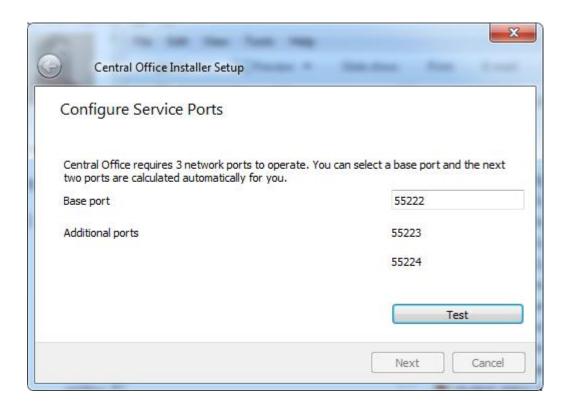
		233
(Central Office Installer Setup	
Crea	ting Maintenance Tool	
		100%
Install	ation finished!	
	Details	
v6.10 Writin	o.3 ng maintenance tool.	•
	llation finished!	
4	III	•
	Next > Can	icel

Option 1: COS Set-up Step 2 Continued PUBLIC CONTINUED INSTRUCTION Installer Steps

Once installation completes, configure service ports

COS has three active services each with its own service port

- default: 55222, 55223, 55224
- Base port is configurable and other two are set consecutively
- Installer includes tool to test port availability

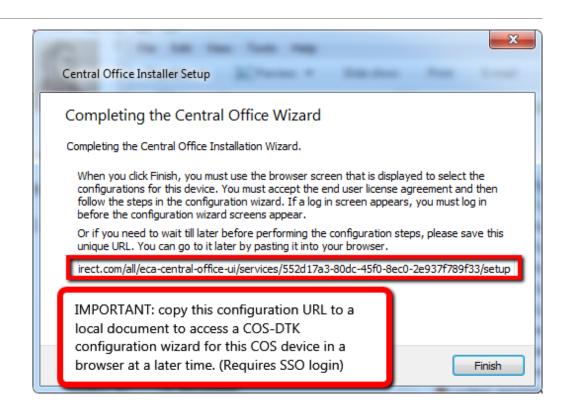


Option 1: COS Set-up Step 2 Continued PUBLIC CONTINUED INSTRUCTION Installer Steps



Completing COS wizard:

At the final screen you will be re-directed to COS-DTK in a local browser to create a configuration for this COS device



Option 1: COS Set-up Step 3 Configure COS Device (COS-DTK)



Four methods for associating a COS device with a configuration in COS-DTK

- Complete 5-step wizard process at the end of COS installation to create a new configuration in COS-DTK
- Complete 2-step wizard process to associate new COS device to an existing configuration in COS-DTK
- 3. Use a "silent installer script" available in the "Deployments" tab of COS-DTK Configuration
- 4. Add unassociated COS device to an existing configuration in "Service Devices" view in COS-DTK



1. Complete 5-step wizard process at the end of COS installation to create a new configuration in COS-DTK

Configure Central Office Service

Previous

1

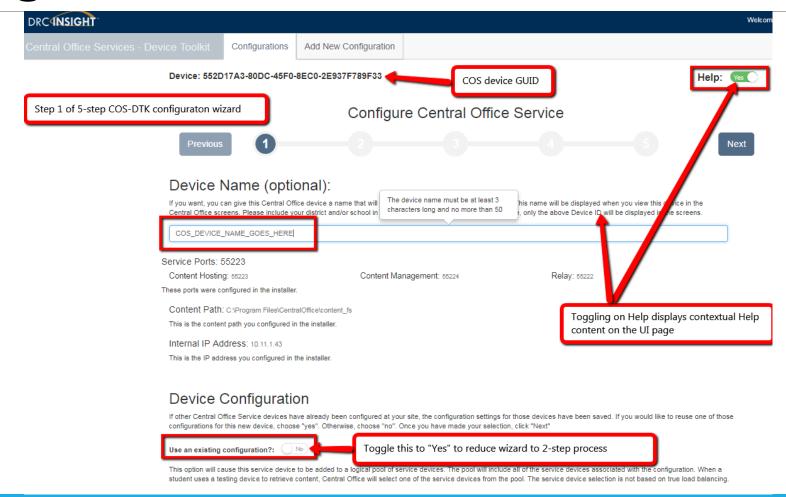
2

3

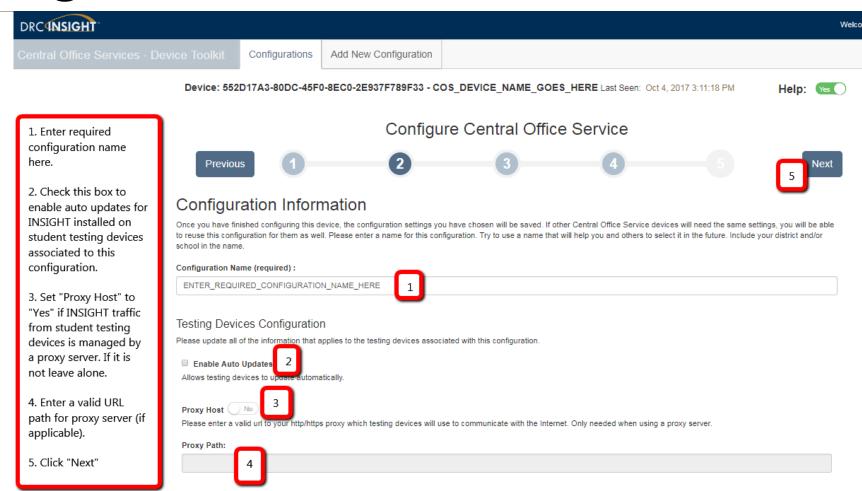
4

Next

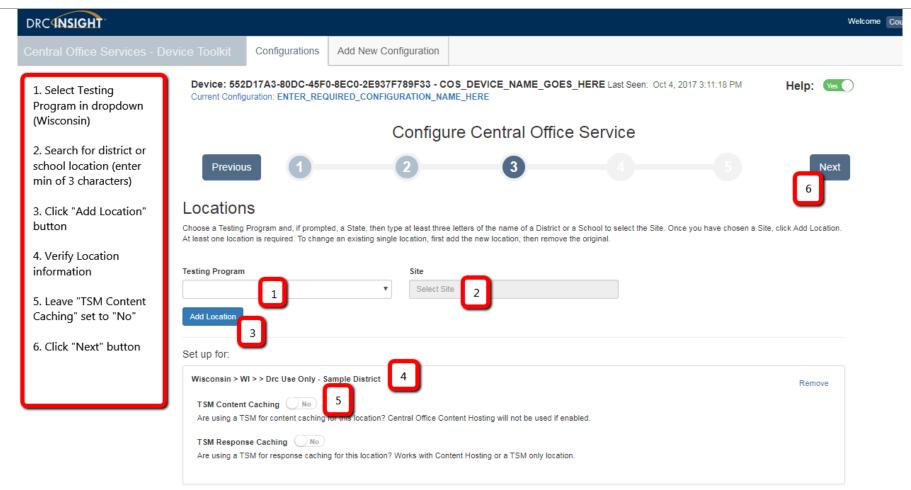




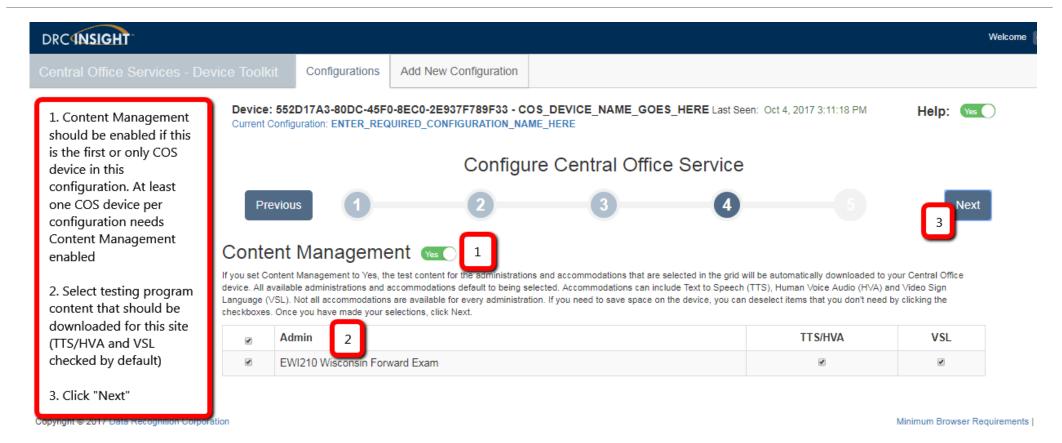






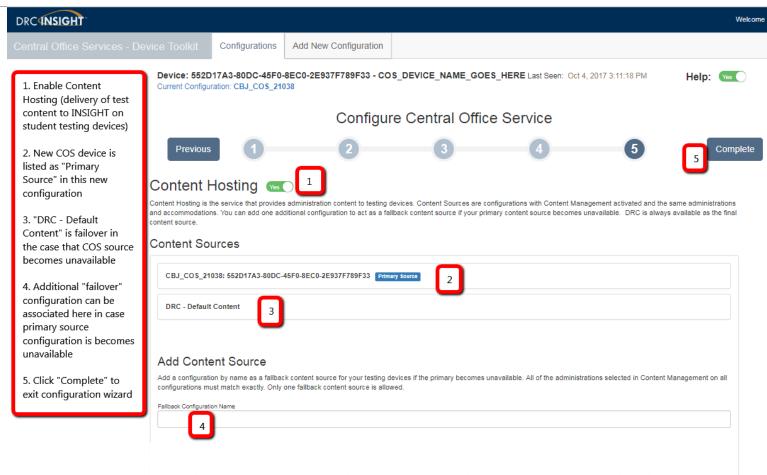






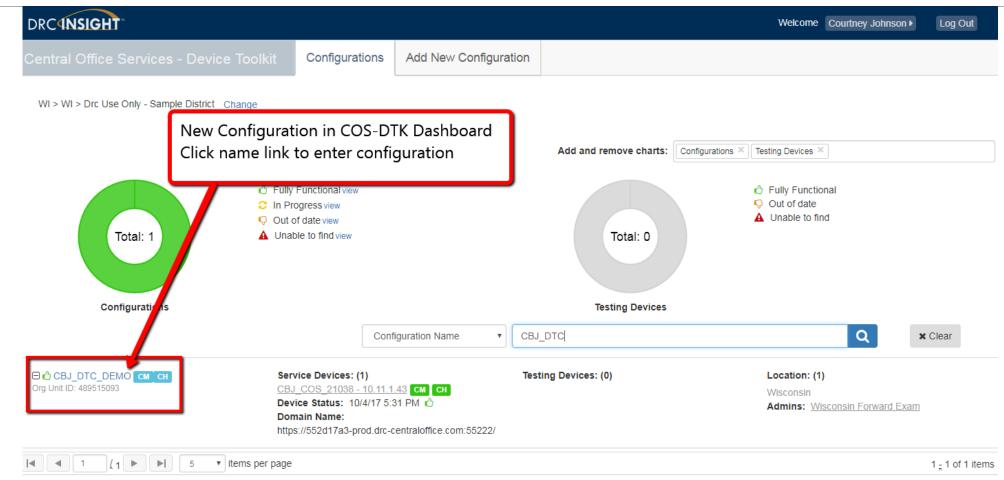






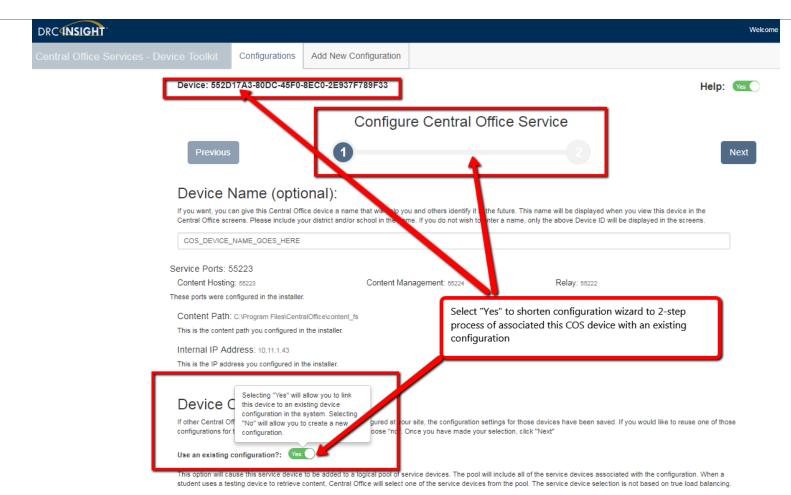


Option 1: COS Set-up Step 3 New Configuration in COS-DTK Dashboard



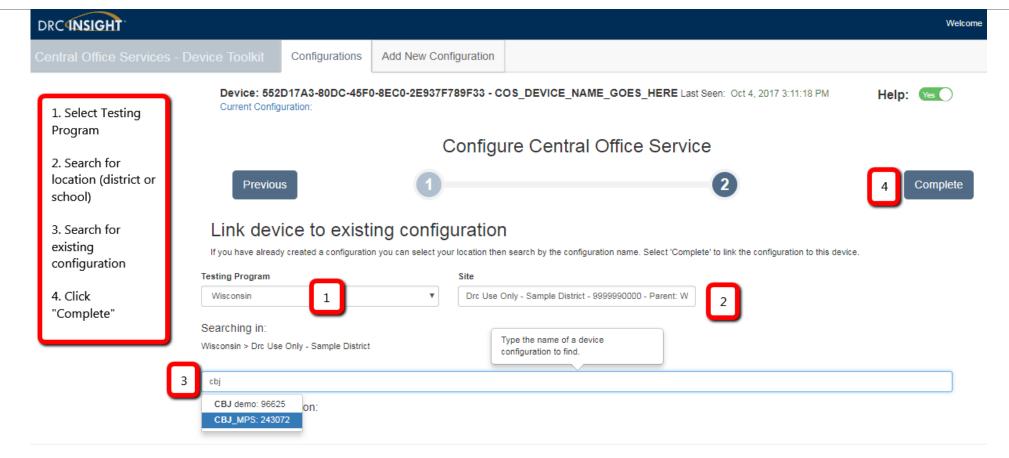
Option 1: COS Set-up Step 4 Add COS Devices to Pool









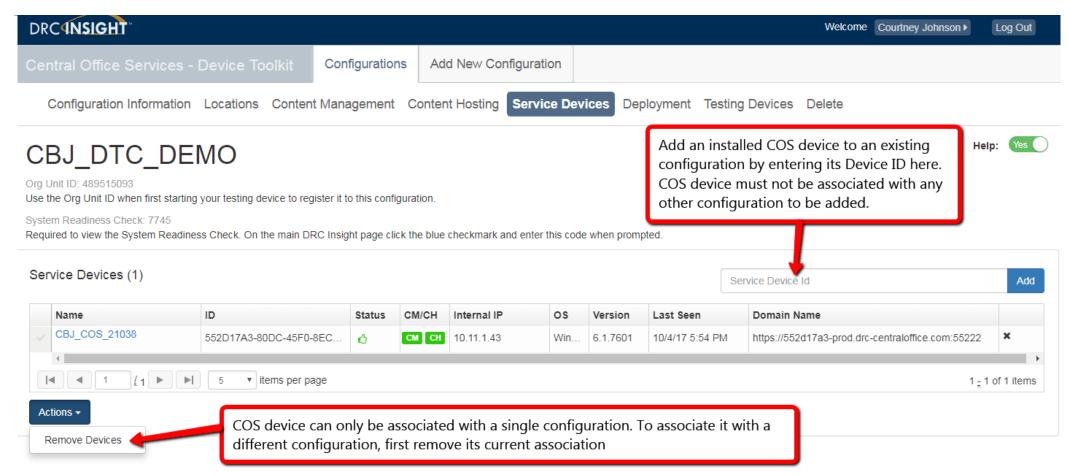


Copyright @ 2017 Data Recognition Corporation

Minimum Browser Requirements









Option 1: COS with TSM Set-up

Install TSM on a host machine

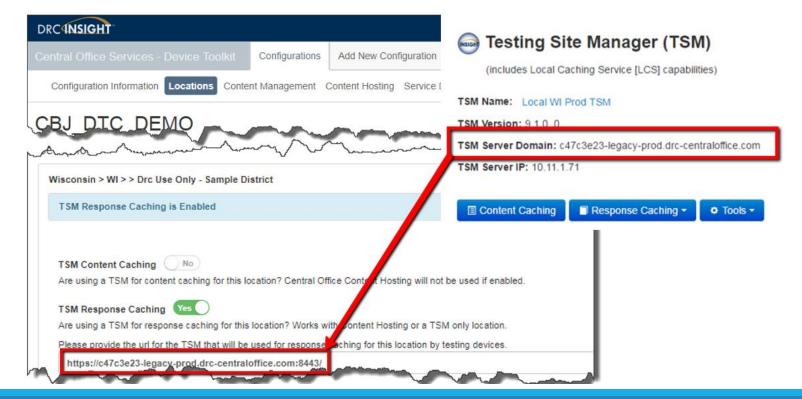
- Install TSM version 9.2.0 (new installation)
- Existing TSM will automatically update to new version if configured for auto updates
- Follow current recommended hardware guidelines
- Host machine must be connected via Ethernet cable



Option 1: COS with TSM Set-up

Configure TSM for Response Caching (COS-DTK)

Enable Response Caching in existing configuration





Option 2: TSM Set-up

- 1. Prepare host device (new installation)
- 2. Install program-specific TSM (new installation)
- 3. Manage TSM content (TSM UI on host machine)
- 4. Configure TSM for Content and/or Response Caching



Install program-specific TSM (new installation)

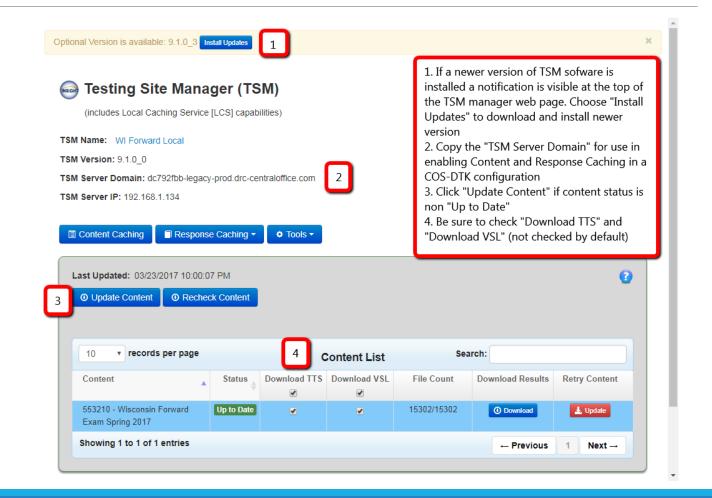
- Choose the installer to fit your host machine
 - Windows (32 or 64), MacOS, Linux (32 or 64)
- Enable Content Caching during installation
- Enable Response Caching during installation
- Launch TSM User Interface by entering http://localhost:8080/ in browser on host machine

IMPORTANT: TSMs are testing program specific.

Download all TSMs used for Forward testing from https://wi.drcedirect.com/default.aspx

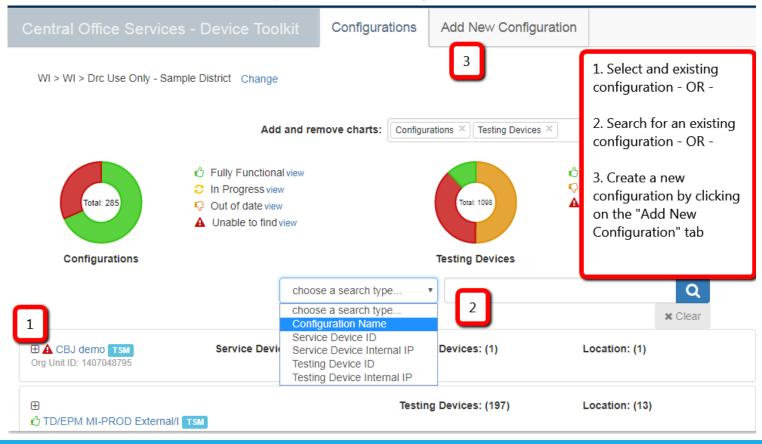


Manage TSM content (TSM User Interface on host machine)



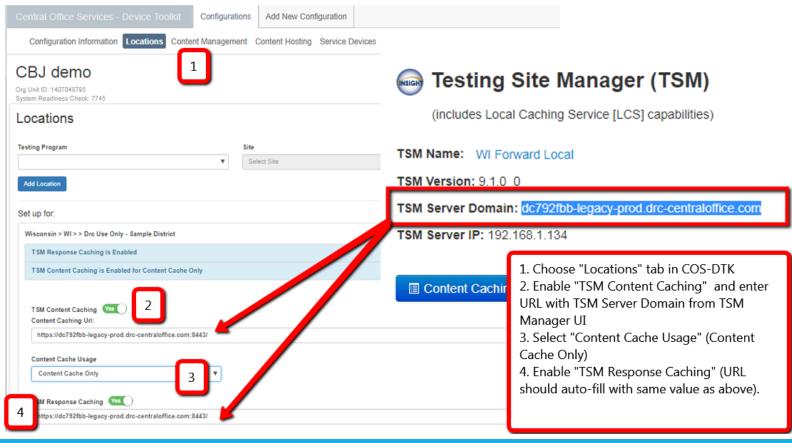


Configure TSM for Content and/or Response Caching (COS-DTK)





Configure TSM for Content and/or Response Caching (COS-DTK)



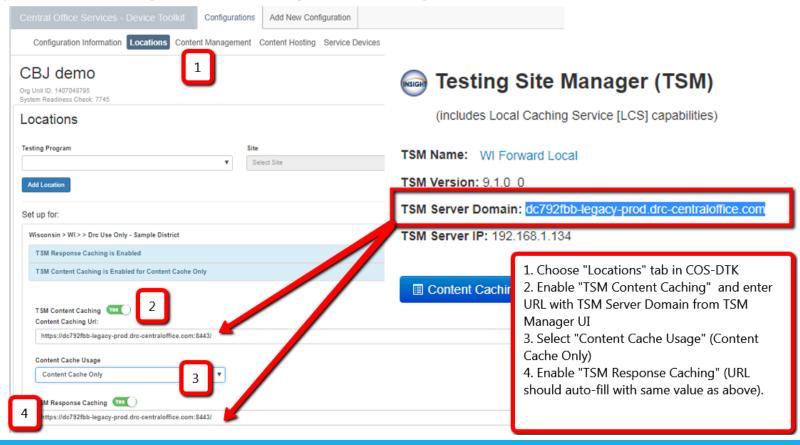
COS and TSM: Backup plan







Enable Response Caching in an existing COS Configuration to switch to TSM



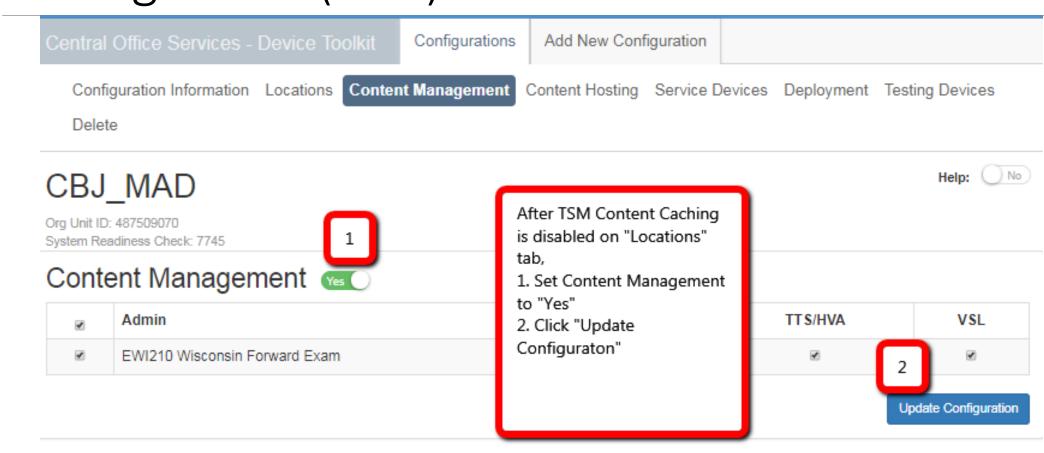


Rolling COS back to TSM — Enable Response Caching

Locations Testing Program Select Site Add Location Set up for: Wisconsin > WI > > Drc Use Only - Sample District Remove TSM Response Caching is Enabled TSM Content Caching is Enabled for Content Cache Only TSM Content Caching Yes Content Caching Url: https://dc792fbb-legacy-prod.drc-centraloffice.com:8443/ Content Cache Usage Don't forget to click Content Cache Only "Update Configuration"! TSM Response Caching Yes https://dc792fbb-legacy-prod.drc-centraloffice.com:8443/ **Update Configuration**

Rolling TSM back to COS – Disable Content Caching (TSM) and Enable Content Management (COS)





DRC INSIGHT: Set-up & Installation





INSIGHT: Secure Browser/Web Application





INSIGHT: Supported Device/OS

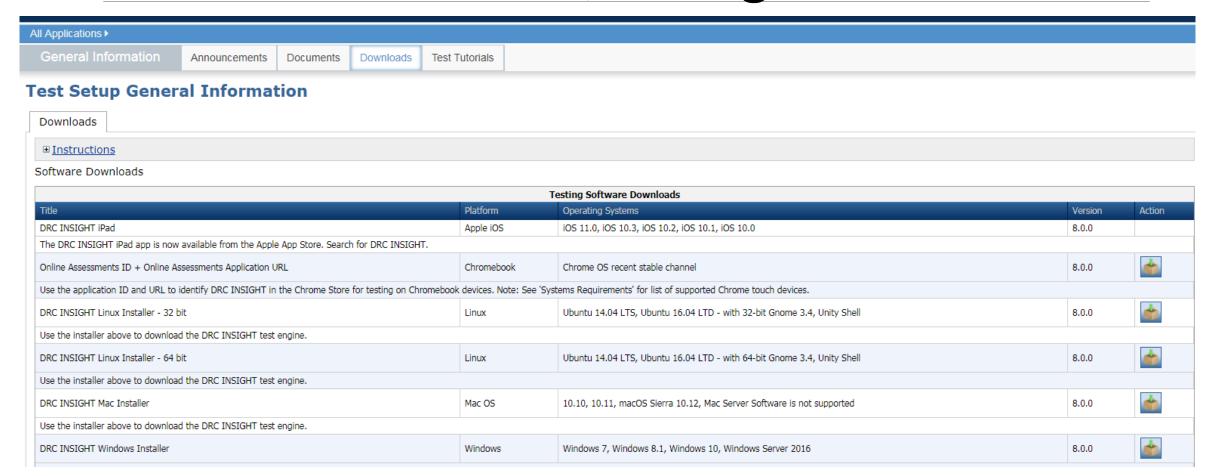
For current support specifications see:

https://wi-insight-client.drcedirect.com/contentservices/download/resources/drc-insight-system-requirements.htm

- Windows 7 and newer (not 8) [INSIGHT installer in eDIRECT]
- Mac OS X (10.10 +) and macOS (10.12+) [INSIGHT installer in eDIRECT]
- Linux (Ubuntu 14.04 +) [INSIGHT installer in eDIRECT]
- iOS (10.x +) iPad gen 4 + still supported [INSIGHT app in iTunes store]
- ChromeOS (recent stable channel) [Chrome store app ID and URL in eDIRECT]
- Android no longer supported



INSIGHT: Installation/Configuration



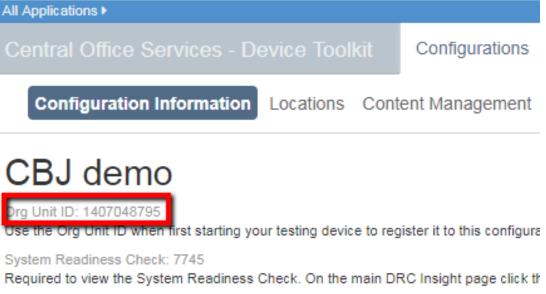




INSIGHT DEVICE (unregistered)

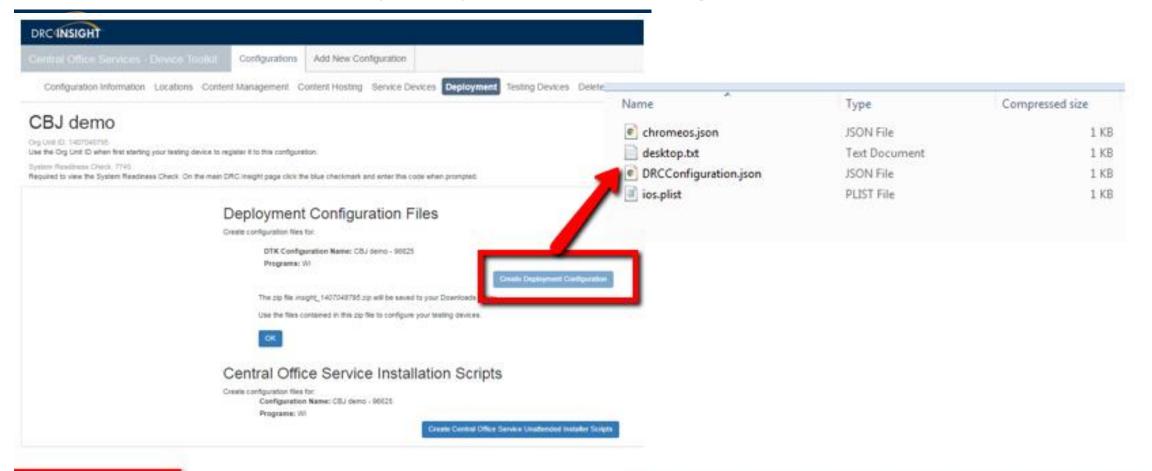
Central Office-Device Toolkit Configuration







INSIGHT: Deployed Configuration





INSIGHT: Deployed Configuration

INSIGHT DEPLOYMENT:

- Windows (Managed [e.g., SCCM]):
- Mac (Managed [e.g. Remote Desktop]):
- Linux (Managed [e.g. Netop]):
- Chromebook/box (Google Admin Console):
- iPad (MDM [e.g., Jamf Pro]):

DRCConfiguration.json

DRCConfiguration.json

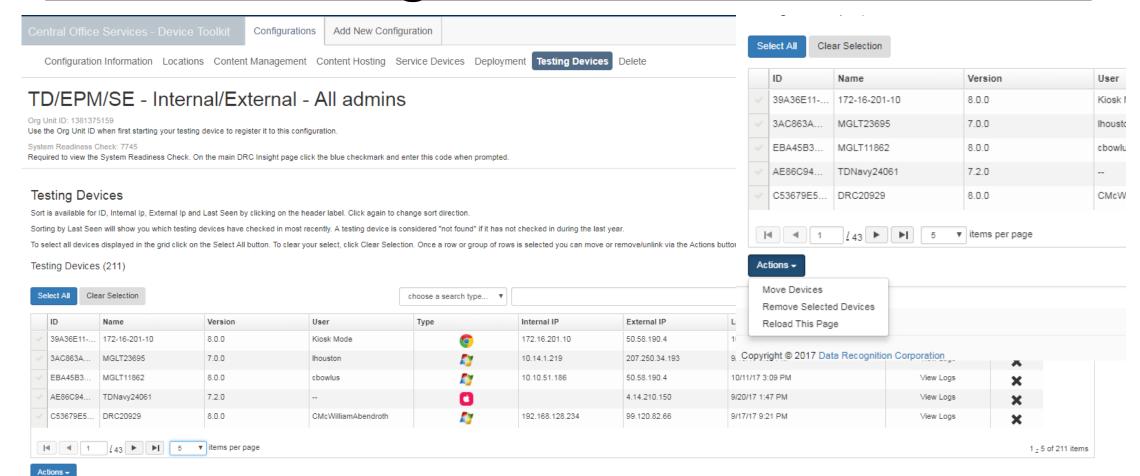
DRCConfiguration.json

chromeos.json

ios.plist



INSIGHT: Manage Devices





Support

DRC HFLP DFSK

Technology and eDIRECT Related Questions

(800) 459-6530

7:00am-5:00pm

A Smooth Testing Experience

DPI and DRC are committed to ensuring a smooth testing experience for district and school technology staff, test administrators, teachers, and, most importantly, students. Should you encounter any issues before or during testing, please don't hesitate to reach out to the DRC Help Desk and/or DPI.

DPI OFFICE OF STUDENT ASSESSMENT

General Assessment and Policy Questions

Alison O'Hara Forward Program Manager (608) 266-5182

Alison.o'hara@dpi.wi.gov

Jennifer Teasdale Education Program Specialist (608) 266-5193 Jennifer.Teasdale@dpi.wi.gov



Questions?

- Please enter your question in the Q&A Section at the bottom of your screen.
- We will focus on questions that are more general and would be appropriate for the group as a whole. School or district situation specific questions will be answered later in the Q&A or via email.
- Remember your question is only visible to you and the presenters until/if a presenter types a reply. Your question and it's response will then be visible to all participants.
- We will answer as many questions as possible in a live (oral) format.
- DRC will follow up with any unanswered questions.

